Dr. Donald W. Grace Procter & Gamble Co. Ivorydale Technical Center Cincinnati 17, Ohio

Dear Dr. Grace:

Thank you for your letter and especially the enclosures. I had mainly in mind further mathematical investigations of the polyhedra, e.g. the Hamilton circuits of higher orders, and whether your present enumeration is complete. Frankly, these questions are not very consequential to chemistry, which is practically well taken care of at much lower orders. But I would have thought you might wish to polish up some of the implications from your thesis.

As to the chemistry notation work itself, I would be very pleased to encourage any further applications your colleagues might foresee. I am rather painfully writing up the remaining sections of the DENDRAL report and the group will want to see this before investing much effort in it. We are continuing this here, for example, putting DENDRAL on the PDP-1 for display and direct user-computer interaction.

I was hurrying those lists to you, and caught the same discrepancies meanwhile. Partly they came from the poor print of my copy of the tables, but I think everything is squared away now.

"1220" is a ringer: Hamilton's circuit (the regular dodecahedron).

I am particularly looking forward to seeing Polya.

Sincerely yours,

Joshua Lederberg Professor of Genetics